CLAIMS

What is claimed is:

1. An object sensing system for a motor vehicle, comprising:

at least one optical sensor;

a lens that directs a first image of a first vehicle area and a second image of a second vehicle area toward said at least one optical sensor;

a display connected to said at least one optical sensor to display at least one of the first and second images.

2. The system of Claim 1, wherein the lens directs the first and second images toward one optical sensor.

3. The system of Claim 2, wherein the first and second images are directed to first and second areas, respectively, of the optical sensor.

4. The system of Claim 1, wherein said at least one optical sensor comprises at least a first optical sensor and a second optical sensor, and wherein the lens directs the first image to the first optical sensor and the second image to the second optical sensor.

5. The system of Claim 4, wherein the first optical sensor is sensitive to visible light and the second optical sensor is sensitive to infrared light.

6. The system of Claim 1, wherein said at least one optical sensor is a charge coupled device sensor that is sensitive to both visible light and infrared light.

7. The system of Claim 1, wherein the first image corresponds to an area behind the vehicle and the second image corresponds to at least one of a vehicle handle area and a window trap area.

8. The system of Claim 1, wherein the first and second images directed by the lens are contained in distinct solid angles.

9. The system of Claim 1, further comprising an image processing device, connected to said at least one sensor, wherein the image processing device generates a signal that indicate a presence of a foreign object in at least one of the first and second images.

10. The system of claim 9, wherein the image processing device detects the foreign object by detecting if a brightness of a portion at least one of the first and second images crosses a threshold.

11. An object sensing system for a motor vehicle having a window lifter and a handle for operating a vehicle leaf, the system comprising:

at least one optical sensor;

a lens that directs a first image of a first vehicle area a second image of a second vehicle area toward said at least one optical sensor, wherein the first vehicle area is a rear view area behind the vehicle and the second vehicle area is one selected from the group consisting of the handle and a window lifter trap area;

a display connected to said at least one optical sensor to display at least one of the first and second images.

12. The system of Claim 11, wherein the lens directs the first and second images toward one optical sensor.

13. The system of Claim 12, wherein the first and second images are directed to first and second areas, respectively, of the optical sensor.

14. The system of Claim 11, wherein said at least one optical sensor comprises at least a first optical sensor and a second optical sensor, and wherein the lens directs the first image to the first optical sensor and the second image to the second optical sensor.

15. The system of Claim 14, wherein the first optical sensor is sensitive to visible light and the second optical sensor is sensitive to infrared light.

16. The system of Claim 11, wherein said at least one optical sensor is a charge coupled device sensor that is sensitive to both visible light and infrared light.

17. The system of Claim 11, further comprising an image processing device, connected to said at least one sensor, wherein the image processing device generates a signal that indicate a presence of a foreign object in at least one of the first and second images.

18. The system of Claim 17, wherein the second vehicle area is the window trap area, and wherein the system further comprises a switch that cuts of a power supply to a motor in the window lifter when the foreign object is detected in the second image.

19. The system of Claim 17, wherein the second vehicle area is the handle, further comprises a switch that places the handle in an unlocked position when the foreign object is detected in the second image.

20. The system of claim 11, wherein the vehicle leaf is a door, and wherein the lens is disposed at a waistline of the door.

21. An object detection method for a motor vehicle having a window lifter and a handle for operating a vehicle leaf, comprising:

capturing a first image of a first vehicle area and a second image of a second vehicle area, wherein the first vehicle area is a rear view area behind the vehicle and the second vehicle area is one selected from the group consisting of the handle and a window lifter trap area;

directing the first and second images to at least one optical sensor;

detecting a foreign object in the second image; and

controlling operation of at least one of the window lifter and the handle if the foreign object is detected.

22. The method of Claim 21, further comprising displaying at least one of the first and second images on a display.

23. The method of Claim 21, wherein the first and second images are directed towards different respective areas of a single optical sensor.

24. The method of Claim 21, wherein the first and second images are directed toward different optical sensors.

25. The method of Claim 21, further comprising cutting off of a power supply driving the window lifter if the foreign object is detected in the window lifter trap area.

26. The method of Claim 21, further comprising placing the handle in an unlocked position if the foreign object is detected in the second image.